

Historic, Archive Document

Do not assume content reflects current
scientific knowledge, policies, or practices.

114
3 P 58

U.S. DEPARTMENT OF AGRICULTURE

2

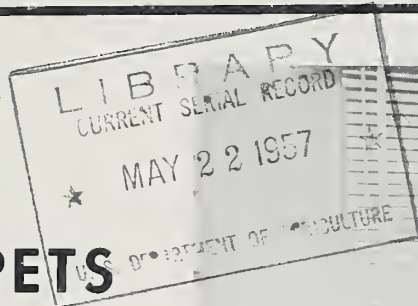
Office of Information

Picture Story No. 102

For Release February 19, 1957



A BETTER WAY TO CLEAN COTTON CARPETS



Wall-to-wall cotton carpets in light, bright colors can be cleaned more thoroughly and dried rapidly by a new in-place cleaning method developed through research sponsored by the U. S. Department of Agriculture. This method features: a specially designed scrubbing machine with a suds-generating unit; a foam-killing device that permits rapid removal of suds; and a quick-drying process.

The new system devised by the Hoover Co., under USDA contract eliminates overwetting and browning of rugs, which caused trouble with ordinary cleaning methods. It should enable professional cleaners to restore bright shades and rich texture to installed cotton carpets and thus encourage greater use of cotton carpets in homes, hotels, clubs, and offices.

Unlike most conventional rug-cleaning methods, the newly developed procedure uses large quantities of pre-generated suds. These are applied to the carpet through the center of a rotating brush of the specially designed machine. After the suds are worked through the carpet pile, suds and loosened soil are sucked up almost instantly through a bellows-type vacuum nozzle around the outer edge of the brush. Suds from 10 times the volume of detergent solution used in conventional rug shampooing are used in about three times the usual scrubbing time, without increased wetting of the carpet. A special foam-killing barrier placed inside the vacuum take-off tank speeds up removal of the large quantity of spent suds. Pieces of metal (bronze turnings) held between wire mesh are sprayed with a silicone de-foaming agent to form the barrier.

For rapid drying, silica-gel crystals are spread on the scrubbed carpet over a covering of thin cotton



Specially designed machine for in-place cleaning of cotton rugs works freshly made suds through carpet pile. The bellows-type vacuum nozzle around outer edge of brush sucks up suds and loosened soil almost instantly. Detergent is pumped from unit in background (left) to suds generator in center of scrubbing head of machine. Vacuum tank for spent suds (right) has special defoaming barrier for speedy suds removal. B1-10C1-1

or between layers of the cloth, at the rate of one pound of gel per square foot of wet carpet. This amount dries the carpet sufficiently within 2 hours for the final step--restoration of the texture of the carpet with an agitation-type vacuum cleaner. The silica gel may be reused after drying in an oven 250° F. for about 4 hours.

Commercial production or adaptation of the new equipment is now being considered by a number of firms. The rapid drying procedure, which requires no special equipment, can be used now by professional rug cleaners. The new cleaning method works just as well on nylon and wool rugs as it does on cotton rugs.



Underside of scrubbing unit shows fresh, clean suds flowing through center of rotating nylon brush. Open spaces in arrangement of bristles form channels aiding flow of suds through the brush. Over 12 quarts of suds are made and worked through each square foot of heavily soiled carpet at a scrubbing rate of 3 square feet per minute.

N-19523



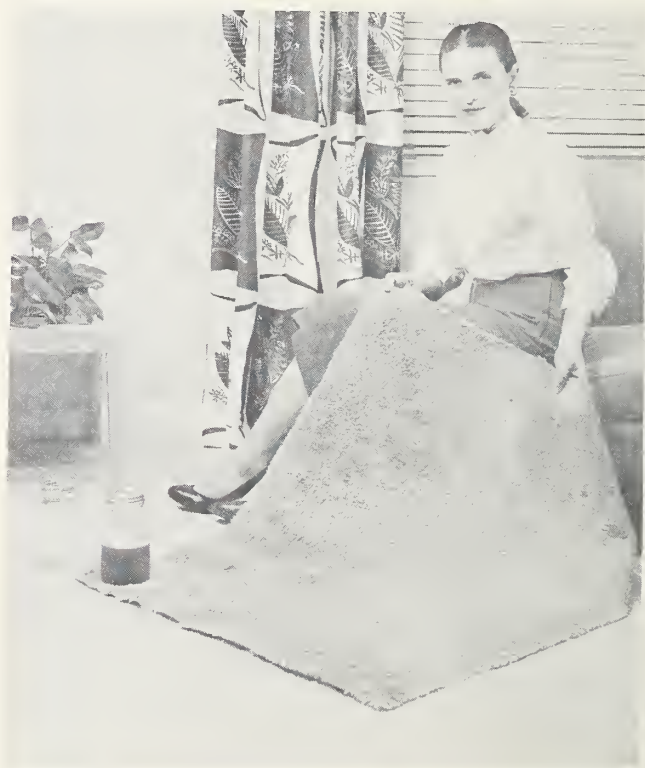
Raking the shampooed carpet with a bambo'o rake loosens the matted pile and facilitates the quick drying process.

C515C1-5



Then silica gel, an efficient drying agent, is applied to the carpet over a thin cotton cloth covering, or between layers of the cloth. One pound of the gel per square foot of wet carpet will dry it enough in two hours for the final step--restoration of the texture. This is done with an agitation-type vacuum cleaner.

C515C1-6



Newly cleaned carpet on the floor compared to soiled cotton carpet of same type held by an employee of the Hoover Company, shows how well new in-place cleaning method and equipment work. Jar at left contains quantity of detergent converted into suds for scrubbing each square foot of carpet. Other jar shows solution and soil removed from the same area.

B1-10C1-3

Magazines and newspapers may obtain glossy prints of any of these photographs from the Photography Division, Office of Information, U. S. Department of Agriculture, Washington 25, D. C. Others may purchase prints, at 75¢ each, from the same address.